

IN THE CLAIMS

Please amend the claims as follows:

Sub E 17. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute-value-independent-shape~~ detector for processing samples of an input signal having a synchronization pulse and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

D' could said predetermined sequence being a first, ~~absolute-value-independent, non-time~~ varying portion, followed by a first, ~~absolute-value-independent, time-varying~~ portion, followed by a second, ~~absolute-value-independent, non-time~~ varying portion, followed by a second, ~~absolute-value-independent, time-varying~~ portion, followed by a third, ~~absolute-value independent, non-time~~ varying portion, one of the first and second, ~~absolute-value independent, time-varying~~ portions having a positive slope and the other one of the first and second, ~~absolute-value-independent, time-varying~~ portions having a negative slope.

18. (Currently Amended) The detector as claimed in claim 17, wherein said ~~absolute-value independent-shape~~ detector produces a pulse when said predetermined sequence is detected.

19. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute-value-independent-shape~~ detector for processing samples of an input signal having a series of synchronization pulses and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, ~~absolute value independent, non-time~~
varying portion, followed by a first, ~~absolute value independent, time-varying~~ portion,
followed by a second, ~~absolute value independent, non-time~~ varying portion, followed by a
second, ~~absolute value independent, time-varying~~ portion, followed by a third, ~~absolute value~~
~~independent, non-time~~ varying portion, one of the first and second, ~~absolute value independent,~~
time-varying portions having a positive slope and the other one of the first and second ,
~~absolute value independent, time-varying~~ portions having a negative slope;

said ~~absolute value independent~~ shape detector producing a shape detection pulse each
time said predetermined sequence is detected; and

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an evaluator responsive to the produced shape pulse detection pulses for determining
whether such shape detection pulses are produced at a predetermined rate expected for the
series of synchronization pulses.

20. (Currently Amended) A synchronization pulse detector, comprising:

a ~~absolute value independent~~ shape detector for processing samples of an input signal
having a series of synchronization pulses and a plurality of non-synchronization pulses, each
one of said synchronization pulses preceding a segment of the input signal having non-
synchronization pulses, to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, ~~absolute value independent, non-time~~
varying portion, followed by a first, ~~absolute value independent, time-varying~~ portion,
followed by a second, ~~absolute value independent, non-time~~ varying portion, followed by a

second, ~~absolute value independent, time-varying~~ portion, followed by a third, ~~absolute value independent, non-time varying~~ portion, one of the first and second, ~~absolute value independent, time-varying~~ portions having a positive slope and the other one of the first and second, ~~absolute value independent, time-varying~~ portions having a negative slope;

said ~~absolute value independent~~ shape detector producing a shape detection pulse and an associated value for the second, ~~absolute value independent, non-time varying~~ portion each time said predetermined sequence is detected; and

an evaluator responsive to the produced shape detection pulses and said associated values of said second, ~~absolute value independent, non-time varying~~ portions for determining whether one of said associated values of said produced second, ~~absolute value independent, non-time varying~~ portions is substantially higher, lower, or the same as a reference value derived from a previous segment of the input signal.

21. (Original) The detector as claimed in claim 20, wherein said evaluator includes a time window responsive to the produced shape detection pulses for determining whether said shape detection pulses are produced at a predetermined rate expected for the series of synchronization pulses.

22. (Currently Amended) A method for detection of a synchronization pulse from an input signal having a plurality of non-synchronization pulses, comprising:

determining, ~~absolute value independent, time-varying~~ properties of the input signal having the synchronization pulse; and

detecting, from said determined, ~~absolute value independent, time-varying~~ properties of the input signal the presence of the synchronization pulse.

23. (Currently Amended) A method for detection of a synchronization pulse from an input signal having a plurality of non-synchronization pulses, comprising:

determining, ~~absolute value independent, time-varying~~ properties of an input signal having the synchronization pulse;

comparing the determined, ~~absolute value independent, time-varying~~ properties with ~~absolute value independent, time-varying~~ properties expected of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

24. (Currently Amended) A method for detection of a synchronization pulse having a substantially non-time varying portion and a substantially time-varying portion, the method comprising:

determining, ~~absolute value independent, time varying~~ properties of one of the portions;

comparing the determined, ~~absolute value independent, time-varying~~ properties with ~~absolute value independent, time-varying~~ properties expected of the one of the portions of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

25. (Currently Amended) A method for detection of a synchronization pulse within an input signal, such pulse having a substantially, ~~absolute value independent, non-time varying~~ portion and a substantially, ~~absolute value independent, time-varying~~ portion, the method comprising:
determining, ~~absolute value independent, time-varying~~ properties of the input signal to identify one of the portions;

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comparing the determined, ~~absolute value independent, time-varying~~ properties with ~~absolute value independent, time-varying~~ properties expected of the one identified one of the portions of the synchronization pulse; and

producing, based on the comparison, an output signal indicative of the detection of the synchronization pulse.

26. (Currently Amended) A method for detection of a synchronization pulse within each of a sequence of input signals having a predetermined rate, such pulse having a substantially, ~~absolute value independent, non-time varying~~ portion and a substantially, ~~absolute value independent, time-varying~~ portion, the method comprising:

determining, ~~absolute value independent, time-varying~~ properties of each of the sequence of input signals to identify one of the portions of such one of the input signals;

comparing the determined, ~~absolute value independent, time-varying~~ properties with ~~absolute value independent, time-varying~~ properties expected of the one identified one of the portions of the synchronization pulse;
producing, based on the comparison, output signals indicative of the detection of the synchronization pulses of the sequence of input signals; and

comparing rate of production of the output pulses with the predetermined rate of the input signals.

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27. (Currently Amended) A system for detecting a synchronization pulse within an input signal, such synchronization pulse having a substantially, ~~absolute value independent, non-time~~ varying portion followed by a substantially, ~~absolute value independent, time-varying~~ portion, the system comprising:

a waveform characteristic detector for producing a detection signal in response to a comparison between actual, ~~absolute value independent, time~~ variations in the input signal and a predetermined, ~~absolute value independent, time~~ variation criterion representative of one of the portions of the synchronization pulse; and

a pulse generator for producing an output pulse in response to the detected signal produced by the waveform characteristic generator.

28. (Currently Amended) A system for detecting a synchronization pulse within an input signal, comprising:

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an ~~absolute value independent~~ detector responsive to samples of the input signal for separating substantially an ~~absolute value independent~~, non-time varying portion of the input signal from a substantially, ~~absolute value independent~~, time varying portion of the input signal;

a timer for determining a time duration of one of the portions; and
a processor for detecting the synchronization pulse in response to the determined time duration.
